



# U.S. DEPARTMENT OF ENERGY

2011 Congressional Nuclear Cleanup Caucus

**Oak Ridge Tennessee**

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# Key Oak Ridge Missions

## Oak Ridge Office

- Science and Technology
- Science Education
- Environmental Cleanup
- Energy & Nuclear Fuel Supply
- National Security
- Technology Transfer

## Integrated Support Center

- Support to DOE Office of Science Lab Sites
- Payment Center
- Other Site Support



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# A World Leading Research and Advanced Manufacturing Park



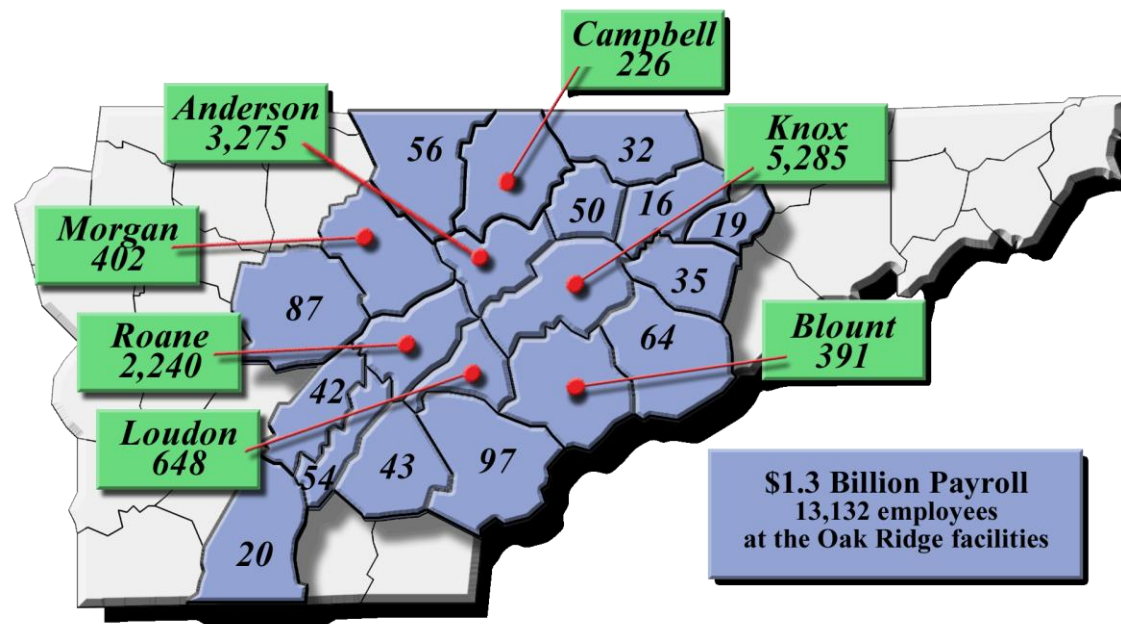
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# Economic Impact of DOE Programs in Tennessee

## Regional Impact



Misc. counties = 50

## Statewide Impact

- \$4.0 billion – increase in gross state product
- 62,000 – full-time jobs supported
- \$90 million – state and local sales tax paid
- 4<sup>th</sup> – largest employer in the State of Tennessee



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# OR Environmental Management Budget

<i>Energy &amp; Water Appropriations Budget Authority in Millions of Dollars</i>	RECOVERY ACT	FY 2010	FY 2012 PRESIDENT'S BUDGET
<b>Environmental Management (EM)</b>	755	436	401



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# Major Concerns for the Public and Vital Missions Largely Resolved by 2020

East Tennessee Technology  
Park completed

City of Oak Ridge  
Population 27,638



Mercury releases to surface  
waters and local waterways  
dramatically reduced

Major concerns for the public,  
environment, and vital DOE  
missions are removed

Legacy Transuranic waste is  
out of Tennessee and U-233 is  
safely dispositioned

City of Knoxville  
Population 182,337



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# Major Project Accomplishments

## Demonstrating Results



### Legacy Waste



### Three Building D&D Project



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# Major Project Accomplishments

## Demonstrating Results

DUF6



✓ *DONE*

✓ *DONE*

Melton Valley



✓ *DONE*



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# Major Project Accomplishments

- Treated 35 million pounds of MLLW/PCB waste since 1991
- Completed waste treatment operations December 2, 2009
- RCRA closure: Completed December 2010 and is awaiting demolition



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# Major Project Accomplishments

## Success Achieved: Witherspoon Scrap Yards Project

- Two privately-owned sites in a low-income and diverse community in South Knoxville
- Received scrap equipment and parts from DOE Oak Ridge sites from the 1950's - 1980's
- Contaminated scrap left outdoors, radioactive & chemical elements leached into soil



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# TWPC and U233 Projects

## TRU Waste Processing Facility



- This project was constructed for the processing of Supernate, Contact Handled (CH) and Remote Handled (RH) Transuranic Waste
- Under Recovery Act have accelerated waste processing via a two shift operation.

- Safe, Secure and Cost Effective Permanent Disposition of U-233 from Building 3019

## U-233 Disposition Project (Building 3019)



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**K-25 Building**

## Project Highlights

- Continued Clean out of the K-25 Building - North End and East Wing
- Continued Excavation of the classified landfill
- Completed demolition of the K-25 West Wing in Jan. 2010



# EM American Recovery & Reinvestment Act Work

\$755M for 24 Environmental Cleanup projects across the Oak Ridge Reservation

Execution of EM Recovery Act work involves four sites, four prime contractors, three DOE program offices, and three funding sources: Defense, Non-Defense, and Uranium Enrichment Decontamination & Decommissioning Fund (UED&D)

- **ETTP (EM):** Bechtel Jacobs performing work K-27 at ETTP. (\$27 M)
  - LATA Sharp Remediation Services is demolishing K-33 at ETTP. (\$65M) Demolition is ~60% complete as of 2/28/11.
- **TRU Waste Processing Center (EM):** Additional shift work added on to existing contract (\$80 M)



# ARRA Projects

## ➤ Environmental Management Waste Management Facility Expansion

Completed: increased capacity from 1.2 million yd<sup>3</sup> to 1.65 million yd<sup>3</sup>

- One month early
- \$2 million under budget



## ➤ ORR Landfill Expansion

Nearing completion (April 2011):  
expanding facility by 385,000 yd<sup>3</sup>



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# ARRA Projects (continued)

## ➤ Tank W-1A Removal Action

Removing the highly radioactive tank and surrounding contaminated soil at Oak Ridge National Laboratory

- Sampling and characterization completed
- Weather enclosure erected
- Field work to begin this spring



## ➤ Melton Valley Monitoring Wells

Completed: installed 16 wells to check for contamination migrating off the DOE Reservation

- On schedule
- \$200K under budget



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# ARRA Projects (continued)

## ➤ K-27 Building ARRA Scope

Completed:

- Construction electrical upgrades
- Storage area fence installation
- Grip Strut installation (3 units)
- Vault clean-out
- Lube oil draining and disposal
- Coolant draining and disposal
- Universal waste removal and disposal
- Asbestos abatement



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# Environmental Cleanup - ORNL



- Cold War Legacy cleanup complete

- 327 excess buildings
- 1.5 million square feet
- Radiological contaminants (Transuranics, Strontium, & Cesium)
- Over 26 million curies



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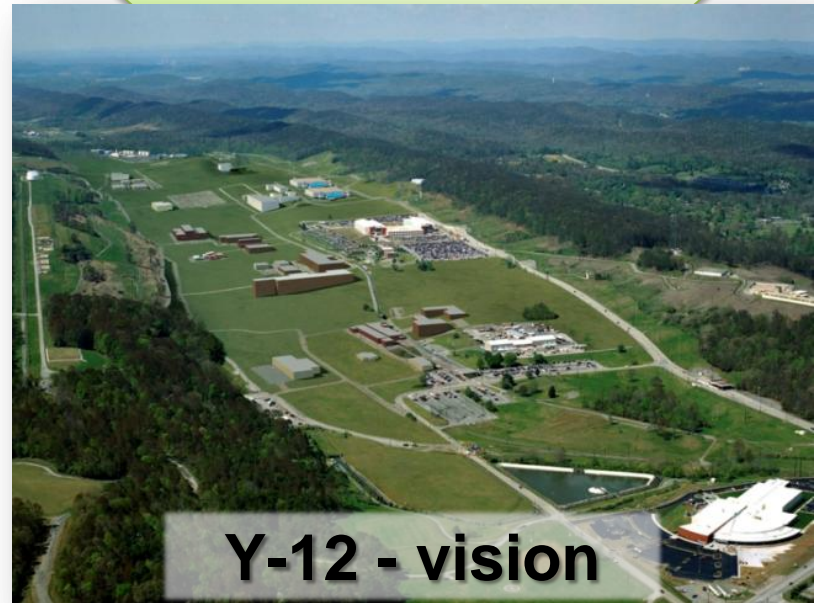
# Environmental Cleanup – Y-12

## Y-12 - Before



- 112 excess buildings
- 3.8 million square feet
- 2 million pounds of Mercury lost dating back to Cold War and earlier times.

- Modernized Y-12 incorporating new Uranium Processing Facility & Highly-Enriched Uranium Materials Facility
- High Security footprint reduced
- Cold War Legacy cleanup complete



## Y-12 - vision



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# East Tennessee Technology Park



2003



2020



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# Project Highlights

Facilities demolished

224

Footprint reduced

2.11 million ft<sup>2</sup>

UF<sub>6</sub> cylinders removed

7,000

Waste treated at TSCA  
Incinerator

35 million lbs.  
(has been successfully  
shut down)

## East Tennessee Technology Park



= Demolished



= Leased/transferred



= Demolition ready



= Being demolished



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# Safety Initiatives Involve All Employees

- **Injury-free event cards:** allows employees to report incidents that pose the potential for accidents
- **Plan of the Day meetings and STARRT cards:** meetings are conducted prior to work each day; a Safety Task Analysis Risk Reduction Talk (STARRT) card is used to discuss scope, ensure employees are familiar with the work and hazards, and discuss what conditions could change
- **New-Hire Orientation:** the President, Vice President, or Manager of Construction personally present our safety approach and expectations to all new hires at their initial orientation
- **After the Holiday Safety Pauses:** we conduct safety meetings for all employees after holidays to refocus them back to working safely
- **People-Based Safety Process:** consists of worker-owned, no- name/no-blame observation teams composed of manual employees with a management champion who help each other work safely



# Oak Ridge: Committed to Confronting Our Unique Cleanup Challenge

## By 2020 we can:

- Eliminate major threat to surface and ground water
- Eliminate major threats to workers, public, environment, and ongoing missions
- Transform ETPP
- Eliminate TRU and U-233 waste
- Dramatically reduce risk and taxpayer liability



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